

REMARKS

Claims 1-29, 31-40, and 42-43 are pending in the present application. Claim 30 was previously cancelled, and claim 41 has been cancelled herein. Claims 1, 7, 33, and 36 have been amended. No new matter has been added. Applicants respectfully request reconsideration of the claims in view of the following remarks.

Objection to Claims 13 and 22

Claim 13 and 22 are objected to because of an informality. As a result of a call to the Examiner seeking clarification regarding this objection, Applicants were instructed by the Examiner that the objection was due to a scanning error and that the objection will be withdrawn.

Rejection of Claims 1-8, 14-19, and 26

Claims 1-8, 14-19, and 25 were rejected under 35 U.S.C. § 102(e) as assertedly being unpatentable in view of Richards, et al., U.S. Publication No. 2002/0075972 (hereinafter “Richards”). Applicants respectfully traverse these rejections.

Applicants have amended claim 1 to more clearly recite at least one of the distinguishing features of an embodiment. In particular, Applicants have amended claim 1 to recite, “creating an output signal from combining the sampled outputs.” Richards fails to disclose this feature.

Applicants note that the Office Action asserted that Richards anticipates claim 8, which recites, “wherein the creating comprises adding the sampled outputs together.” In its assertion, the Office Action identified reference numeral 1027 in Figure 10 of Richards as disclosing this feature. Office Action, page 4. This assertion, however, is incorrect.

Reference numeral 1027 of Figure 10 is a max value selector. Richards, paragraph [0201]. The operation of the max value selector 1027 is described with reference to Figure 12, wherein Richards states:

In this example embodiment, when the signal applied to the (+) input terminal (i.e., signal 1044) is greater than the signal applied to the (-) input terminal (i.e., signal 1024), output signal 1046 assumes a HIGH output state, which for example corresponds to a “1” bit. When the signal applied to the (+) input terminal (i.e., signal 1044) is less than the signal applied to the (-) input terminal (i.e., signal 1024), output signal 1046 assumes a LOW output state, which for example corresponds to a “0” bit. Richards, paragraph [0212].

As clearly described in the above-referenced paragraph, Richards max value selector 1027 merely compares two signals to set a third signal. The input signals are not combined in any manner (as recited in Applicants’ claim 1) or added together in any manner (as recited in Applicants’ claim 8).

Applicants’ claim 7 has been amended to recite, “creating an output signal from the sampled outputs, the output signal including components of both sampled outputs.” As discussed above, Richards compares two signals and sets an output signal accordingly. In contrast, Applicants’ claim 7 recites that the output signal include components of both sampled outputs. This limitation is not taught or suggested by Richards.

Applicants’ claim 14 recites, “combining the samples to create an output signal,” for which the Office Action identified the max value selector 1027 and the signal 1046 of Richards as disclosing. As discussed above, however, the max value selector 1027 of Richards does not *combine* the samples, but rather only compares two signals and sets a third signal.

Applicants’ claim 25 recites, “combining the samples to create an output signal,” for which the Office Action identified the max value selector 1027 and the signal 1046 of Richards

as disclosing. As discussed above, however, the max value selector 1027 of Richards does not *combine* the samples, but rather only compares two signals and sets a third signal.

In view of the above remarks, Applicants respectfully request that the rejections of claims 1, 7, 14, and 25 be withdrawn. Claims 2-6 and 8 depend from and further limit claim 1, and claims 15-19 and 25 depend from and further limit claim 14. Accordingly, Applicants respectfully request that the rejections of claims 2-6, 8, 15-19, and 25 be withdrawn as well.

Rejection of Claims 9-12, 20, 21, 23, 24, 26, 29, and 31-41

Claims 9-12, 20, 21, 23, 24, 26, 29, and 31-41 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Richards in view of Applicant Admitted Prior Art (AAPA). It is respectfully submitted that these dependent claims are allowable by reason of depending from an allowable claim as well as for adding new limitations.

Claims 9-12 depend from and further limit claim 1, which is allowable over the cited references as discussed above. Accordingly, Applicants respectfully request that the rejections of claims 9-12 be withdrawn as well.

Claims 20, 21, 23, 24, and 26 depend from and further limit claim 14, which is allowable over the cited references as discussed above. Accordingly, Applicants respectfully request that the rejections of claims 20, 21, 23, 24, and 26 be withdrawn as well.

Claim 29 recites at least one limitation not disclosed by the cited references, namely, “the equalizer containing circuitry to *combine* samples produced by the first and the second matched filters to produce an output signal.” Notably, this limitation is completely ignored by the Office Action – that is, nowhere in the Office Action is it identified where in the cited references an equalizer containing “circuitry to *combine* samples produced by the first and the second matched

filters to produce an output signal” is disclosed. While the Office Action asserts that the AAPA discloses an equalizer, the AAPA fails to disclose an equalizer having “circuitry to *combine* samples produced by the first and the second matched filters to produce an output signal” as recited in Applicants’ claim 29. The Office Action cannot simply ignore explicit elements of Applicants’ claims. Applicants have reviewed the cited references and have found no disclosure regarding this limitation.

In the event that the Examiner is asserting that the channel equalizer 335 of Applicants’ Figure 3 discloses this feature, Applicants note that the channel equalizer 335 receives an input from a single pulse-matched filter 305. There is simply no disclosure of an equalizer that contains circuitry to *combine* samples from the first matched filter and the second matched filter, which operate on the same signal input.

In view of the above remarks, Applicants respectfully request that the rejection of claim 29 be withdrawn. Claims 31 and 32 depend from and further limit claim 29, and accordingly, Applicants respectfully request that the rejections of claims 31 and 32 be withdrawn as well.

Claim 33 has been amended to recite, “an equalizer coupled to the first and the second matched filters, the equalizer containing circuitry to combine the samples produced by the first and the second matched filters to produce an output signal.” As discussed above, the cited references fail to teach or suggest circuitry to *combine* the samples from the first and second matched filters. Accordingly, Applicants respectfully request that rejection of claim 33 be withdrawn.

Claims 34 and 35 depend from and further limit claim 33, and accordingly, Applicants respectfully request that the rejections of claims 34 and 35 be withdrawn as well.

Claim 36 has been amended to recite, “circuitry to detect and eliminate errors that may be present in a combined signal produced from the output sample of the first and the second matched filters.” As discussed above, the cited references fail to disclose a combined signal produced from the output samples of the first and second matched filters. Accordingly, Applicants respectfully request that rejection of claim 36 be withdrawn.

Claims 37-40 depend from and further limit claim 36, and accordingly, Applicants respectfully request that the rejections of claims 37-40 be withdrawn as well. Claim 41 has been cancelled herein.

Rejection of Claims 42 and 43

Claims 42 and 43 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Richards in view of Applicant Admitted Prior Art (AAPA), and in further view of Ariyoshi, et al. U.S. Patent No. 6,049,536 (hereinafter “Ariyoshi”). Claims 42 and 43 depend from and further limit claim 36, which is allowable over the cited references as discussed above. Accordingly, it is respectfully submitted that these dependent claims are allowable by reason of depending from an allowable claim as well as for adding new limitations.

Rejection of Claims 27 and 28

Claims 27 and 28 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Richards in view of Ariyoshi. Claims 27 and 28 depend from and further limit claim 25, which is allowable over the cited references as discussed above. Accordingly, it is respectfully submitted that these dependent claims are allowable by reason of depending from an allowable claim as well as for adding new limitations.

Conclusion

Applicants have made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Ron Neerings, Applicants' Attorney, at 972-917-5299, so that such issues may be resolved as expeditiously as possible. No fee is believed due in connection with this filing. However, should one be deemed due, the Commissioner is hereby authorized to charge the same, or credit any overpayment, to Deposit Account No. 20-0668.

Respectfully submitted,

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Date

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